

AMENDMENTS TO THE CLAIMS

1-9. Canceled

10. (Currently amended) A solenoid plunger system for an electropneumatic pressure transducer, comprising at least partly a solenoid plunger and a core in a casing which focuses magnetic field lines M,

wherein the solenoid plunger includes at least a first recess on a side facing toward the core and/or the core includes at least a first recess on a side facing toward the solenoid plunger,

wherein an air gap is provided between the solenoid plunger and the core, the air gap being adjustable by relative movement between the solenoid plunger and the core, during which relative movement the solenoid plunger can, at least partly, be moved into or out of the first recess in the core and/or the core can be moved, at least partly, into or out of the first recess in the solenoid plunger;

wherein the casing includes at least a first shell and a yoke, each of high magnetic permeability, wherein the first shell is arranged between the solenoid plunger and at least one coil and/or at least one magnet, and the air gap is arranged in a region between the first shell and the yoke; and

wherein the casing includes a second shell of high magnetic permeability between the first shell and the yoke, said second shell comprising at least one recess on its side facing away from the core for focusing magnetic field lines M from the yoke onto the core, and in the region of the recess of said second shell, the yoke, the core, and/or an adjustment member of high magnetic permeability is/are moveable relative to said second shell for adjusting the ~~magnetically~~ effective magnetic length L of the recess of the second shell.

11. (Previously presented) The solenoid plunger system according to claim 10, wherein the casing is in the form of an iron casing.

12. (Previously presented) The solenoid plunger system according to claim 10, wherein the core is in the form of an iron or magnetic core.

13. (Previously presented) The solenoid plunger system according to claim 10, wherein the recess of the second shell is in the shape of an annular groove.

14. (Previously presented) The solenoid plunger system according to claim 10, wherein the adjustment member is in the form of an adjustment ring.

15. (Previously presented) The solenoid plunger system according to claim 10, wherein the air gap is arranged in a region between the first shell and the second shell.

16. (Previously presented) The solenoid plunger system according to claim 15, further comprising a spacer of low magnetic permeability that is arranged between the first shell and the second shell.

17. (Previously presented) The solenoid plunger system according to claim 10, further comprising a spacer of low magnetic permeability that is arranged between the first shell and the second shell.

18. (Currently amended) The solenoid plunger system according to claim 10, wherein the core further comprises at least a second recess on a side facing away from the solenoid plunger and/or the adjustment member further comprises at least a first recess on a side facing toward the core; and

wherein the ~~magnetically~~ effective magnetic length L of the recess of the second shell, for targeted focusing of the magnetic field lines M, is adjustable by relative movement between the core and the adjustment member, during which relative movement the core can, at least partly, be moved into or out of the first recess in the adjustment member, and/or the adjustment member can be moved, at least partly, into or out of the second recess in the core.

19. (Previously presented) The solenoid plunger system according to claim 18, further comprising a first attenuator in the first recess of the solenoid plunger, and/or a second attenuator in the first recess of the core, and/or a third attenuator in the second recess of the core, and/or a fourth attenuator in the first recess of the adjustment member, wherein the first, second, third and/or fourth attenuator are/is made from an elastomer.

20. (Previously presented) The solenoid plunger system according to claim 10, wherein the core includes at least a third recess at an end facing away from the solenoid plunger for the engagement of a tool for adjusting its position.

21. (Previously presented) The solenoid plunger system according to claim 10, wherein the adjustment member includes at least a second recess on a side facing away from the core for the engagement of a tool for adjusting its position.

22. (Previously presented) The solenoid plunger system according to claim 10, wherein the casing further comprises a holding device for the coil or the magnet.

23. (Previously presented) The solenoid plunger system according to claim 22, wherein the holding device has a high magnetic permeability.

24. (Currently amended) The solenoid plunger system according to claim [[22]] 25, wherein the plain bearing has a high magnetic permeability.

25. (Previously presented) The solenoid plunger system according to claim 22, wherein the casing further comprises at least one plain bearing for the solenoid plunger arranged between the solenoid plunger and the first shell.

26. (Previously presented) The solenoid plunger system according to claim 10, wherein the core is moveable relative to the second shell by way of a screw thread.

27. (Previously presented) The solenoid plunger system according to claim 10, wherein the adjustment member is moveable relative to the second shell by way of a screw thread.

28. (Previously presented) The solenoid plunger system according to claim 10, wherein the first recess in the solenoid plunger on the side facing towards the core is beveled off so as to increase the adjustment range.

29. (Previously presented) The solenoid plunger system according to claim 10, wherein the first and/or second recess of the core is beveled off so as to increase the adjustment range.

30. (Previously presented) The solenoid plunger system according to claim 10, wherein the adjustment ring on the side facing toward the iron core is beveled off so as to increase the adjustment range.